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CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH
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Weekly Bulletin

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Automobile Accidents and Head Injuries

It is doubtful that any other subject related to mortality is receiving greater attention than deaths due to automobile accidents. In spite of the publicity that is given to this subject, there seems to be no diminution in the numbers of accidents and deaths that occur in the operation of motor vehicles. One of the large insurance companies reports that street and highway accidents for the first six months of 1935 have killed approximately 15,200 in the United States. This record shows a decrease of 2 per cent over similar casualties that occurred during the first six months of 1934. The report states, however, that during the last four years deaths from automobile accidents have been 34 per cent greater in the last half of the year than in the first half, and if the same should hold true for the current year, there will be approximately 35,600 deaths from this cause in 1935.

Out of the 15,200 deaths reported during the first half of the year, 8000 have been pedestrians. Nearly 3100 persons have been killed in collisions between cars and the percentage of such deaths has been slightly greater than during the first six months of last year. About 500 persons have been killed in the collision of automobiles and trains. More than 1500 have been killed in the collision of automobiles with fixed objects and nearly 1500 have also been killed in noncollision accidents.

The report also emphasizes the seriousness of automobile pedestrian accidents. The records during the first half of the year show that about 40 per cent of all personal injury automobile accidents involve pedestrians but the deaths of pedestrians comprise more than 50 per cent of all automobile accident fatalities. Furthermore, the records show an increase of almost 13 per cent in the number of drivers under the influence of liquor who were involved in accidents and also an increase of 10 per cent in the number of pedestrians under the influence of liquor who were involved in such accidents.

While the number of deaths in automobile accidents is given the widest publicity, comparatively little is stated relative to the injuries that occur in motor vehicle accidents. A very large number of such injuries are head injuries. Skull fractures are of common occurrence in this type of accident. To be sure, similar injuries are common in many industries in spite of the conspicuous results that have been accomplished by safety organizations. At all events, it would seem that brain trauma is important in automobile accidents. Dr. S. A. Sandler has written upon the subject of brain trauma in the monthly bulletin issued by the Board of Health of Hudson County, New Jersey. His statement reads as follows:

"One of the chief salient features of modern life is speed. It does not matter so much whether an object is well done, but it seems more important that it be done fast. It is no wonder therefore, that the Department of Commerce reports that the automobile is responsible for the death of over 30,000, and injuries to over 300,000 individuals in the United States during 1934. The United States Department of Labor reports 283 deaths and 49,000 injured in the State of New Jersey during the peak year of 1923. In the same year 1684 were killed and 366,756 workers were injured during the same period in New York State industries. According to these figures, I feel safe in saying that there were 15,000 killed and 3,000,000 workers injured in the mines, mills, factories and workshops of the United States.

''From the medical legal standpoint, these accidents arouse a good deal of acrimony due to differences of medical opinion, most of which is honest, some of which is ignorant, cruel and stupid. For some reason or other, the moment an injured individual comes into court, claiming damages, there are doctors who are ready to damn this plaintiff as a malingerer or faker, and there is another group of practitioners who see lesions and make claims that have no basis in fact. The question of head trauma, is fast becoming one of the most important questions in modern medicine.

''The whole concept of head trauma is rapidly changing. It is no longer necessary to think only in terms of actual tissue damage, but it is as equally important to view this matter from a standpoint of altered cerebral physiology.

''When an individual receives a fracture of the skull or is rendered unconscious for several days, everybody agrees that he has received a definite injury, but should the trauma produce no outstanding objective signs, then, the individual is apt to be branded as a neurotic. Is it not strange that long before there were compensation courts or automobile liability suits, that people with head injuries would uniformly complain of headaches, pains in various parts of the body, restlessness in sleep and insomnia? In addition to this, the old time physician would see tremor of the hands, as well as other parts of the body, impaired vision, diplopia, vertigo and irritability, as well as confusion, poor concentration and excitement, as a fairly regular sequellae following head trauma. In addition to this, months afterwards many of these people complain that they are easily fatigued, and their speech is affected, that they feel a compulsion to withdraw from social contact and suffer from weakness in the extremities associated with drowsiness, lethargy, diminution of hearing, vocational inefficiency and heaven forbid—impotency.

''It was Cushing who stood out against the idea that people who receive head injuries which are followed without objective findings are either neurotics or malingerers. He felt that in severe brain trauma, that serious damage occurred to the central nervous system and caused people to become crippled just as severely as if they had lost their arms or legs. It is true, that in nearly every accident there is a functional component, but the same thing holds true of all types of illness. Some individuals show a greater psychological superstructure to organic disease than other individuals. In the final analysis, it must be admitted that illness on the psychologic level, simply means that the body is in danger and that the ego reacts accordingly with some degree of fear and terror. As far back as 1904, Adolph Meyer, the grand old man of American Neuropsychiatry, noted that many patients who died following severe head trauma, that these same patients on autopsy disclosed a subarachnoid hemorrhage with maceration of the brain on the under surfaces of the frontal and temporal lobes. Meyer found that this was due to the fact that there is an inadequate water bed between these parts of the brain and the base of the skull. Because the tips of both the frontal and temporal lobes are very susceptible to injury, one may have a real tissue damage and yet show no objective sign. Even more remarkable, an injury in the frontal lobe may give euphoria. I recently had two patients in one week illustrating this point. One of these patients has definite clinical evidence of a frontal lobe tumor confirmed by encephalography, who aside from occasional attacks resembling petty mal has no other symptom. In spite of the fact that this man appears to have an extensive lesion in the brain, he is free from all headaches, is euphoric and wonders why his family compels him to see a physician. The other man is also euphoric following a head injury which was severe enough at first to cause his confinement in a mental hospital for five weeks, during which time he was paranoid and very destructive.

''Martland and Beling of Newark in the study of 309 cases in which examination of the gross tissue alone was made from all types of trauma, found capillary foci of bleeding in the basal ganglia and by countrecoup. Martland also wrote a paper before this, in which he thought that the symptoms which indicated degenerative changes in the brain of prize fighters whom he called 'punch drunk' were due to multiple capillary hemorrhages.

''The most common finding in head trauma is subarachnoid bleeding. In the early stages of bleeding, one finds well preserved red blood cells free within the meshes of the dilated pia. Following this there is a proliferation of fibroblasts and an outpouring of phagocytic elements. In this way arachnoid adhesions are formed which years later may give convulsions. Trauma is often followed by an edema, which causes ischemic changes in the ganglion cells and areas of focal necroses similar in every way to the areas resulting from obstruction to the minute blood vessels from any cause. These lesions may be important in explaining the symptoms and signs occurring months or years after trauma.

"Physical examination reveals very little. There is usually no objective findings. The patient is weak and may sway on walking. Nystagmus and faulty conversation may be the only findings noted. With modern research we are beginning to understand that these symtoms of headaches, vertigo, etc., are probably due to impaired cerebral circulation following trauma. The vasomotor center itself may become unstable following trauma with the result that the blood supply to the body may be adequate on rest but inadequate on exertion.

"No physician has the right to state that the symptoms following head trauma are neurotic ones, until he has done a complete physical, neurologic and mental examination on such a patient. This of course, means that the visual fields, Barany tests, encephalography and other indicated measures are carried out."

Eat less; chew more.
Waste less; give more.
Ride less; walk more.
Go less; sleep more.
Talk less; listen more.
Worry less; work more.
Idle less; think more.
Preach less; practice more.
Clothe less; bathe more.
Scold less; laugh more.

"To make the most of dull hours; to make the best of dull people; to like a poor jest better than none; to wear the threadbare coat like a gentleman; to be out-voted with a smile; to hitch your wagon to the old horse if no star is handy—that is wholesome philosophy."—Bliss Perry.

The sublime and the ridiculous are often so nearly related that it is difficult to class them separately. One step above the sublime makes the ridiculous and one step above the ridiculous makes the sublime again. —Thomas Paine.

THE BLACK WIDOW SPIDER

(Continued from last issue)

"Three natural insect parasites of the black widow are known to us—two hymenopterous (wasps) and one dipterous (a fly). Dozier (1931) working at Port-au-Prince, Haiti, described an egg parasite (a wasp belonging to the family Sceliondae) of the black widow spider.

"The new species described by Dozier was named by him Baeus latrodecti. This appears to be a true egg parasite, a single larva destroying a single egg; therefore, the complete brood in an egg sac is not destroyed and some spiders hatch, only partial control being achieved. We have not found this parasite in California.

"One of the authors working at Davis, California, found a dipterous parasite (family Chloropidae) of the egg sac of the black widow. The species as yet undescribed has also been found near San Jose by L. R. Cody, at Ventura by Rodney Cecil, and also in Berkeley and on Mt. Hamilton by one of the authors. This is a predator feeding on the spider eggs within the sac and is also known to destroy the complete brood.

"Attempts to rear this parasite in the laboratory has so far failed apparently owing to the inability to mate them under artificial conditions. Work on this predator is being continued.

"A wasp-like parasite of the genus was discovered by one of the authors on Mt Hamilton and was reared from egg sacs taken in the field and transferred to the laboratory at the University of California at Berkeley. This is also a predator in the larval stage on the eggs in the sac and completely destroys the brood. It is also an undescribed species. Research on this predator is being conducted and the second generation is now being on hand."

The ladder of life is full of splinters, but they always prick the hardest when we're sliding down.— W. L. Brownell.

MORBIDITY

Complete Reports for Following Diseases for Week Ending June 22, 1935

Chickenpox

630 cases: Alameda County 2, Alameda 42, Albany 4, Berkeley 33, Emeryville 1, Oakland 61, Piedmont 3, San Leandro 6, Colusa 1, Contra Costa County 1, El Cerrito 1, Richmond 1, Placerville 4, Fresno County 1, Fresno 1, Sanger 1, Humboldt County 1, Eureka 13, Kern County 2, Hanford 1, Lassen County 18, Los Angeles County 62, Arcadia 1, Avalon 9, Beverly Hills 17, Compton 1, Culver City 1, Glendale 10, Huntington Park 2, Inglewood 2, Long Beach 13, Los Angeles 91, Pasadena 17, San Gabriel 4, Santa Monica 5, Sierra Madre 2, Torrance 1, Lynwood 5, South Gate 5, Signal Hill 2, Mill Valley 1, Salinas 1, Orange County 9, Anaheim 7, Newport Beach 2, Orange 1,

Santa Ana 7, Hemet 1, Sacramento County 1, Sacramento 7, Colton 1, San Bernardino 2, San Diego County 1, Coronado 2, San Diego 22, San Francisco 62, San Joaquin County 3, Stockton 5, San Luis Obispo County 1, San Luis Obispo 2, San Mateo County 4, Daly City 1, Santa Barbara County 2, Lompoc 1, Santa Barbara 5, Santa Maria 4, Santa Clara County 15, San Jose 1, Sunnyvale 1, Willow Glen 1, Santa Cruz 5, Tulare County 1, Oxnard 1, Woodland 1.

Diphtheria

40 cases: Berkeley 1, Oakland 7, San Leandro 2, Eureka 2, Imperial County 2, Los Angeles County 5, Los Angeles 15, Pasadena 2, Mendocino County 1, Riverside County 1, Sacramento 1, Santa Paula 1.

German Measles

507 cases: Alameda County 1, Alameda 2, Berkeley 4, Oakland 70, Piedmont 1, San Leandro 10, Contra Costa County 1, Fresno County 6, Humboldt County 1, Eureka 12, Kern County 1, Hanford 1, Lassen County 4, Los Angeles County 36, Alhambra 7, Burbank 1, Compton 2, Glendale 3, Glendora 1, Huntington Park 2, Inglewood 1, Long Beach 11, Los Angeles 71, Montebello 2, Pasadena 25, Pomona 1, San Fernando 4, Santa Monica 1, Sierra Madre 1, Whittier 1, Lynwood 1, Hawthorne 3, South Gate 2, Mill Valley 1, Merced 1, Orange 1, Santa Ana 4 Corona 4, Sacramento 16, Ontario 2, San Bernardino 1, San Diego County 27, National City 1, San Diego 18, San Francisco 62, San Joaquin County 2, Stockton 4, San Bruno 1, Santa Barbara County 2, Santa Maria 1, Santa Clara County 9, Gilroy 1, Mountain View 2, Palo Alto 11, San Jose 16, Sunnyvale 5, Santa Cruz County 2, Sonoma County 11, Dinuba 5, Tuolumne County 6, Woodland 1.

Influenza

24 cases: Los Angeles County 4, Glendale 3, Los Angeles 12, Pomona 1, Anaheim 1, San Diego 1, Santa Maria 1 Petaluma 1.

Malaria

One case: California.*

Measles

976 cases: Alameda County 9, Albany 3, Berkeley 15, Oakland 35, Piedmont 5, San Leandro 2, Colusa County 4, Contra Costa County 15, Antioch 8, Concord 1, Walnut Creek 3, Fresno County 5, Fresno 2, Humboldt County 1, Eureka 21, Kern County 7, Bakersfield 4, Hanford 1, Los Angeels County 24, Alhambra 1, Beverly Hills 10, Burbank 17, Compton 1, El Segundo 1, Glendale 4, Huntington Park 5, Inglewood 2, Long Beach 69, Los Angeles 81, Monrovia 1, Montebello 1, Pasadena 9, Pomona 1, San Fernando 2, Santa Monica 2, South Pasadena 1, Whittier 1, Lynwood 10, Hawthorne 1, Monterey Park 1, Madera County 1, Madera 8, Merced County 1, Modoc County 4, Monterey County 6, Salinas 2, Soledad 5, Napa 1, Orange County 39, Brea 3, Fullerton 6, Newport Beach 4, Orange 5, Santa Ana 49, Placentia 1, Tustin 13, Riverside County 10, Beaumont 8, Hemet 1, Riverside 5, Sacramento County 11, Sacramento 63, Hollister 1, San Bernardino County 2, San Bernardino 1, San Diego 9, San Francisco 124, San Joaquin County 24, Lodi 4, Stockton 1, Tracy 2, San Luis Obispo 1, San Mateo County 1, San Mateo 1, Santa Barbara County 1, Lompoc 18, Santa Barbara 1, Santa Clara County 10, Gilroy 4, Mountain View 5, Palo Alto 24, San Jose 47, Sunnyvale 1, Willow Glen 2, Santa Cruz County 4, Shasta County 4, Solano County 1, Dixon 10, Sonoma County 7, Petaluma 3, Oakdale 1, Dinuba 1, Tulare 1, Tuolumne County 2, Sonora 1, Ventura County 13, Santa Paula 3, Yolo County 5, Woodland 4.

Mumps

187 cases: Alameda County 2, Alameda 7, Berkeley 3, Emeryville 1, Oakland 55, San Leandro 2, Sutter Creek 2, Antioch 1, Kern County 3, Los Angeles County 3, Azusa 1, Burbank 6, Compton 1, Huntington Park 1, Long Beach 3, Los Angeles 16, Pasadena 1, Pomona 1, San Gabriel 1, Santa Monica 1, San Rafael 1, Fullerton 1, Placentia 1, Plumas County 1, Riverside County 4, Corona 3, Sacramento 3, San Bernardino County 1, San Diego County 1, San Diego 12, San Francisco 9, San Joaquin County 4, Lodi 9, Stockton 6, Tracy 1, San Luis Obispo County 1, San Luis Obispo 1, Santa Barbara County 1, Santa Maria 1, Palo Alto 1, Sonoma County 6, Tehama County 2, Tulare County 2, Dinuba 1, Yolo County 1, Woodland 1, California 1.*

Pneumonia (Lobar)

39 cases: Berkeley 1, Oakland 1, Los Angeles County 10, Avalon 1, Inglewood 1, Los Angeles 12, Redondo 1, Maywood 1, Riverside County 1, Corona 1, Sacramento 1, San Diego 2, San Francisco 2, San Luis Obispo County 1, Santa Barbara 1, Ventura County 1, Oxnard 1.

Scarlet Fever

165 cases: Alameda County 1, Alameda 4, Berkeley 2, Oakland 13, San Leandro 1, Antioch 1, Fresno 1, El Centro 1, Kern County 3, Los Angeles County 6, Long Beach 1, Los Angeles 31, Pasadena 1, Pomona 1, San Fernando 2, San Gabriel 2, Torrance 3, Monterey Park 1, Bell 2, Ukiah 1, Merced County 1, Merced 1, Napa County 1, Nevada County 3, Orange County 1, Anaheim 1, Fullerton 2, Tustin 1, Beaumont 1, Sacramento County 4, Sacramento 19, Redlands 1, San Diego County 2, San Diego 13, San Francisco 11, San Joaquin County 5, Stockton 1, San Mateo County 1, Redwood City 1, San Mateo 1, Santa Barbara 5, Santa Clara County 3, San Jose 2, Siskiyou County 1, Dunsmuir 1, Dinuba 1, Ventura County 3.

Smallpox

9 cases: Los Angeles 2, San Bernardino County 2, Santa Clara County 1, Santa Cruz County 2, Tulare County 2.

Typhoid Fever

6 cases: Imperial County 1, Calexico 1, Manhattan 1, San Joaquin County 1, Sierra County 1, Tehama County 1.

Whooping Cough

146 cases: Berkeley 12, Oakland 13, Piedmont 2, San Leandro 2, Fresno 1, Hanford 1, Los Angeles County 5, Alhambra 1, Avalon 1, Burbank 1, Culver City 1, Glendale 7, Huntington Park 2, Los Angeles 17, Pasadena 1, Redondo 1, San Fernando 1, Santa Monica 2, Hawthorne 3, Orange County 2, Anaheim 2, Santa Ana 4, La Habra 1, Sacramento County 1, Sacramento 1, San Diego County 5, National City 9, San Diego 4, San Francisco 25, San Joaquin County 4, Stockton 7, Santa Barbara County 1, Santa Clara County 1, Palo Alto 3, Ventura County 2.

Meningitis (Epidemic)

9 cases: Oakland 1, Gridley 1, Lassen County 1, Los Angeles 3, Sacramento County 1, Sacramento 1, California 1.*

Dysentery (Amoebic)

6 cases: Los Angeles 1, Colton 1, San Francisco 2, California 2.*

Dysentery (Bacillary)

6 cases: Long Beach 1, Los Angeles 4, Orange County 1.

Pellagra

One case: Los Angeles County.

Poliomyelitis

32 cases: Berkeley 1, Bakersfield 3, Los Angeles County 2, Los Angeles 26.

Tetanus

4 cases: Hanford 1, Los Angeles 2, Santa Clara County 1.

Trachoma

One case: California.*

Encephalitis (Epidemic)

One case: Sacramento County.

Hookworm

One case: Pasadena.

Rocky Mountain Spotted Fever

One case: Lassen County.

Food Poisoning

12 cases: Santa Monica 7, San Francisco 5.

Undulant Fever

7 cases: Covina 1, Glendale 1, Inglewood 1, San Fernando 1, Redlands 1, San Bernardino 1, San Francisco 1.

Tularemia

2 cases: Sonoma County.

Coccidioidal Granuloma

One case: Hanford.

Septic Sore Throat (Epidemic)

2 cases: San Francisco 1, San Bruno 1.

Relapsing Fever

One case: San Bernardino County.

Rabies (Animal)

19 cases: Los Angeles County 2, Culver City 1, Los Angeles 4, San Diego 10, San Joaquin County 1, Stockton 1.

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* Cases charged to "California" represent patients ill before entering the state or those who contracted their illness traveling about the state throughout the incubation period of the disease. These cases are not chargeable to any one locality.

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